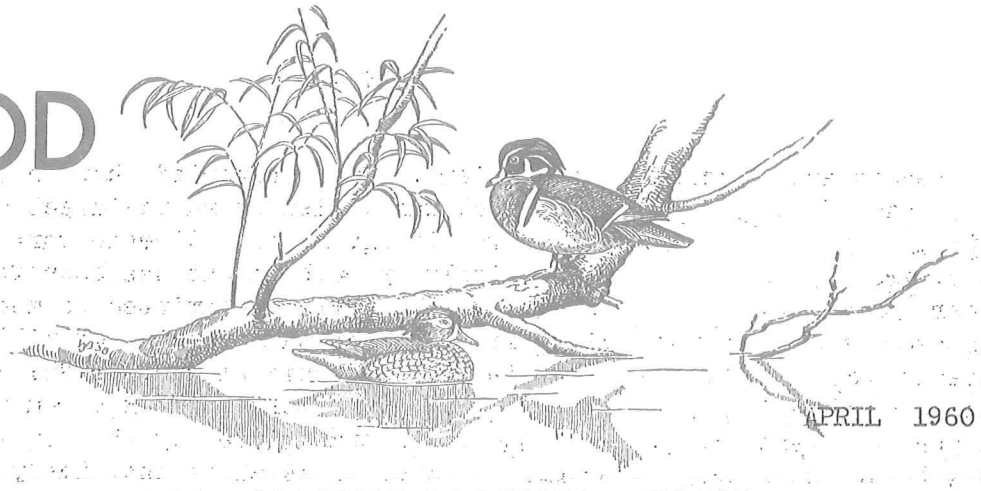
The
WOOD DUCK



Vol. 13 No. 8 APRIL 1960

HAMILTON NATURALISTS' CLUB

ECONOMIC MAMMALOGY

By Leslie A. Prince

A brief review of history reveals the importance of the relationship of mammals to man and the part they have played in the development of civilization and the destinies of the human race. Since early times man has depended upon mammals as a medium of transportation, beasts of labour, food, clothing and, in many cases, for his complete existence. Mammals have played an important role in ancient and modern wars and in the exploration and development of countries. It has been stated that no other single factor has contributed more to the development of the Canadian wilds than the pursuit of the beaver by the early explorers and hunters. The history and romance associated with the beaver is legend today. In following the trails of the beaver, vast unknown territories and new industries were revealed. An outstanding example was the development of the Hudson's Bay Company whose influence in the world of commerce has been felt since early historic times. At the beginning of the 19th century thousands of buffalo roamed the Great Plains of North America, sustaining a race of savage Indians. The development of the railroad and the wholesale slaughter of buffalo by the white man reduced the vast numbers almost to a point of extinction. Today they are replaced by great herds of horses, cattle, swine and sheep. The Eskimos of the far north rely upon the mammals of that vast region for food, shelter, clothing and industries. Everywhere throughout the ancient and modern world we find the people of the earth dependent upon mammals both wild and domesticated and using them and their numerous products for many purposes. Large industries, commerce and trade revolve around mammals from the lowly mouse to the mammoth elephant.

The effect of mammals with relation to man is not always beneficial for vitally important is the damage created by many species. Millions of dollars damage annually to agricultural crops, orchards, forest regions, food stores and livestock has been attributed directly to certain species. The labour and finance involved in combatting and controlling the injurious mammals adds to the tremendous annual financial loss. Bell[1] has estimated the annual damage to crops in the United States by all rodents, including the introduced species, at $500,000,000. A number

of species are known disease carriers. It is reported that in 1914 and 1915 in Nevada $5,000,000 worth of stock was killed by rabid-infected predators, chiefly coyotes. Tularemia, or rabbit fever, is a disease warranting serious consideration. It is carried chiefly by rabbits but has been found in various other mammals and also in birds and is easily transmitted to man. Various other diseases are known to be disseminated by certain species of wild mammals. A notable example of this is the terrible bubonic plague, or "black plague", which has ravaged various parts of the world at intervals from a remote date down to the present generation. The disease is transmitted by the bites of fleas that infest certain species of rodents, chief of which is the widely-distributed brown house rat, although ground squirrels and other rodents also are definitely known to be disseminators in some localities. Lantz[2] says that the house rat is responsible for more deaths among human beings than are all the wars of history, because of its relation to bubonic plague which in the 14th century destroyed from two-thirds to three-fourths of the population of large areas of Europe,--25,000,000 people,--and since 1896 has killed 9,000,000 people in India alone,--1,200,000 people in 1907. The spotted fever, or "tick fever", of the Rocky Mountain region is transmitted to human beings by the bites of wood ticks which have become infected through first biting infected mammals of some sort. The adult ticks have been found on mountain goats, coyotes, badgers, wood rats, mice, woodchucks, snowshoe rabbits and bears, but are found more frequently on domestic stock; hence, many animals aid in the spread of the disease by harbouring the ticks. Domestic sheep are excellent collectors of ticks, which lodge in their wool easily. It has been thought by some that they could be used effectively to collect ticks and make possible their destruction by frequently "dipping" the sheep. It does not seem to be very practical as some of the most favourable localities for ticks are not favourable to sheep and sheep can not be long run in numbers over the same pasturage used for cattle and horses.

The influence of mammalian economy with relation to human welfare presents such a complex study and reveals so many intricate implications that it is impossible to deal with all phases of the subject within the confines of this paper. A complete understanding of the subject of economic mammalogy requires not only a knowledge of the mammals and their habits, but also a comprehensive knowledge of botany and zoology in general, economics, certain phases of history and an understanding of legislative procedure and principles of game laws and conservation.

The actual methods of study in economic mammalogy would be dependent upon the phase or form of the general subject in which the student is interested. Craig and Henderson[3] state in this connection:

"As in the much more highly developed science of economic ornithology, in economic mammalogy there are three different lines of evidence, of unequal importance, upon which to base conclusions:-Purely circumstantial evidence, direct observation or the testimony of eye witnesses, and the examination of the contents of stomachs. In a general way, circumstantial evidence is the least reliable and most likely to be misleading of the three. A mountain lion may kill a calf. After it has fed, a rain may descend and obliterate the tracks of the big cat. Then a bear comes along and feeds upon the carcass, leaving his tracks to prove his guilt to the satisfaction of the owner of the calf,

who promptly begins a round-up of the bears of the vicinity, and the guilty party escapes punishment because of the lack of evidence against him. However, as in human courts of justice, some kinds of circumstantial evidence, under some circumstances may be the very strongest sort, conclusive and incontrovertible."

It is granted considering this reference that the basic determination as to the specific relationship of a species to the position it maintains in the economic picture, in many instances, arises from the examination of its food. However, a complete determination involves a much more complex study than food alone. The food habits of a species must be considered with relation to the various organisms in its diet, their value or usefulness, abundancy, etc. A species must be examined for its possible status as a source of meat supply, aesthetic value, fur or other valuable, related commodities. A knowledge of a species' habits, breeding, distribution, numbers and its general relation to the area it inhabits with regard to disease, property damage, and its general effect, whether good or bad, upon the welfare of the community as a whole is necessary. The economic status of a species cannot be judged in its entirety but must be one involving its geographic distribution. For example, the meadow mice, or voles, are found to be distributed almost entirely over the North American continent. In the far northern portions of the range of these species, they form the most important item of food for the valuable fur-bearing mammals and as such the fur industry is actually dependent upon the availability of these smaller mammals. In the more southern populated and agricultural areas the meadow mouse is a pest and causes millions of dollars damage annually to agricultural crops, gardens, trees and orchards. How then can we pass judgment and categorize the meadow mouse with relation to economic and human welfare? The judgment with regard to these particular species must be in two portions and the evidence of both valuable and injurious qualities revealed. The whole sum must then be analyzed and examined with much discretion, common sense and knowledge and the general category applied.

A sound knowledge of the game laws, fur returns, trappers' licence returns, tourist revenue, industrial development must be secured so that the student may appreciate the legislative control and development of wild life as a whole and its relation to the various species involved.

Laws concerning mammals, both wild and domesticated, are of very ancient origin. In the Old Testament we find laws concerning horses, asses, cattle, goats and sheep for the sacrifice and forbidding the eating of camels, conies, hares, swine, weasels, ferrets, mice, moles and, by implication, bats and flying foxes,--"Flying creeping things, which have four feet."

In England laws relating to wild animals developed at a very early date, including a fundamental principle that lies at the root of all fish and game laws, to wit, that all wild animals belong to the state, based upon the fact that they move freely from one man's property to that of another and are not in actual possession of anyone until they are either caught or killed. The recognition of this principle led to various problems which had to be solved by legislation or court decisions, and precedents established by courts soon became recognized as law of equal force with legislative enactments. Such, for instance, was the question as to who owns the carcass of an animal that is on one man's property and dies on another's.

The Federal Government protects species of migratory birds by an act in constitution because it controls interprovincial affairs. Mammals, if sufficiently migratory in nature, would be controlled in the same manner. However, due to various seasonal, ecological, distributional and population variations existing in provinces throughout Canada, the legislation becomes one of provincial jurisdiction.

The development and legislation of game laws presents a very complex problem and is one of scientific nature and must be based on sound biological and technical knowledge of our wild animals, their habits and their intricate economic relations. Constant investigation and research is necessary. Conditions affecting wild life may change rapidly so that laws applicable to conditions existing today may be improper a year from now. The difficulties of legislation may be appreciated when one realizes that any disturbance of one species, either by increase or decrease in numbers, or by the introduction of another species that becomes a competitor for food and shelter, affects the other species, either to their advantage or disadvantage, sometimes with far-reaching and disastrous results. Thus the application of legislation cannot be considered as directed to one species, but must be considered in the light of its effect upon the whole environment, its relation to other species, food supply, enemies and many other pertinent factors.

To aid in a better understanding of the application of game laws, their legislation in the most beneficial manner and the conservation of our wild life, extensive research programmes are being carried on throughout Canada today. Many problems are yet unsolved and when the answers to such problems are available, it will mean proper administration of game laws and vital adjustments to accommodate the various problems as they are met with and understood.

Annually millions of tourists from United States and other countries flock to northern areas. The increasing revenue derived from licences and the sale of gasoline, food, novelties and a variety of other commodities realizes millions of dollars each year. Licensing of fishermen, trappers, hunters, tourists, camps and guides annually yields very considerable economic gain. The fur trade, also, retains its status as an important industry, with Canadian-exported furs bringing new money into circulation for the benefit of all the people.

No one can deny the value of wild life as one of our greatest media of recreation and relaxation. Each year thousands of city dwellers, office and factory workers vacation in the northern lake country, where the sight of a deer, the moose, the black bear and the friendly chipmunks and squirrels in their natural habitat is an unforgettable memory which sends them back refreshed in mind and body to combat the many complex problems and difficulties that face them in the never-ending struggle for existence. Countless pleasures are added to the holiday whether hunting, photographing or merely observing mammalian life in its natural setting,--all these activities closely related in the welfare and economy of our country, the value of which cannot be counted in dollars and cents and yet is so vitally important to the health and morale of everyone.

1 Bell, G. Arthur. Death to rodents. U. S. Dept. Agric. Yearbook for 1920, pp. 421-438.

2 Lantz, David E. The house rat: The most destructive animal in the world. Yearbook, U. S. Dept. Agric. for 1917, pp. 235-251.
The brown rat in the United States. U. S. Biol. Surv. Bull. No. 33, 1909.

3 Henderson, Junias and Craig, Elberta L. Economic Mammalogy. 1932, p. 182.

SURVEY OF ONTARIO CHRISTMAS CENSUS

By Alice Lamoureux

There are many keen youngsters in our Junior Club under the able leadership of Dr. Douglas M. Davies who show an unusual talent for ornithology. An example is John Miles, Vice-President of the Junior Naturalists' Club, who has prepared for the members of this Club and for other interested bird-observers, a time-consuming report of the Christmas Bird Count of 1959-60. John Miles compiled data from twenty-two cities of Ontario and Buffalo (about half of the territory of the bird-watchers of this American city lies across the Niagara River into Ontario).

Hamilton, on December 27th, 1959 was overcast with fog and rain and there was a north-east wind of 8 m.p.h. There was a maximum temperature of 37 degrees that day and a low of 33 degrees. However, fifty-two observers turned out to record the 70 species seen in this area.

In John Miles' report of the twenty-three cities, there were 515 observers participating in the Bird Count and 129 species of birds were identified. Although "Ontario is a bird conscious province", to quote AUDUBON FIELD NOTES, it has slipped from the first place of Dominion Championship for the Christmas Bird Counts; Vancouver in B .C. heading the Canadian list with 104 species.

A species of bird which is uncommon, or out of its geographical range or habitat is referred to as rare. Therefore, it is with interest that Southern Ontario records the erratic visits of northern residents such as an Iceland Gull, a Gray Jay and a Boreal Chickadee.

We have experienced so far this year in the Hamilton area, a winter of unusually mild temperatures, although there has been snow and ice. Yet it is rare that birds like the Yellow-breasted Chat, Myrtle and Yellow-throated Warblers, Savannah Sparrow and Tufted Titmouse could be seen on a Christmas Bird Count in a temperate climate. These birds usually seek countries of a warmer temperature to continue their feeding habits, during this time of year but for one reason or another, stragglers are sighted each year.

A Baltimore Oriole was seen in Toronto and there was a report of a Killdeer from that same city. A Mockingbird was seen in London and one in West Elgin. Two species of wrens were spotted,-- 13 Carolina Wrens and 1 Long-billed Marsh Wren. Of the family, Turdidae, there were Hermit Thrushes recorded in Toronto and Robins seen in South Peel and Hamilton. Remarkable to note also was the identification in Oshawa of a Virginia Rail, withstanding our winter's cold when the species is accustomed to the warmth of countries as far south as Guatemala. The big news last year from Port Arthur-Fort William area was a report of 457 Bohemian Waxwings. In this year's Christmas Bird Count there was a report of 30 Bohemian Waxwings from this area. An exceptional report this year was the noting of an unusual number of Bobwhite. There were 18 seen in St. Thomas and 66 in West Elgin.

We are grateful to John Miles for the contribution of the Ontario Christmas Bird Cen sus 1959, surveyed above. The chart is being published separately and speaks proudly for the high calibre of interest and endeavour in a youthful bird-watcher from the Hamilton Naturalists' Club.

- TRIP TIPS -

Here's an interesting tip! Miss Evelyn Morris, Chairman, Membership Committee, has sent us a letter received from Mrs. Edwin Parsons of Cayuga, Ontario. Because of a very hospitable invitation which it contained, we have taken the liberty to include in "The Wood Duck", portion of Mrs. Parsons letter of February 27th, 1960. It reads in part, as follows:

"I do enjoy reading about all the activities of the Club and wish that I could be more than a corresponding member. I have attended the Audubon Screen Tours with my family and I must say how much we have enjoyed them all.

"We maintain several bird-feeding stations and have for several years. I would like to report that this is the first time we have seen the Evening Grosbeak. We live 2 miles south of Cayuga along the Grand River. They enjoyed the sunflower seeds and then disappeared. There were around 15 in the flock.

"We would welcome any of the Club to our farm to enjoy bird hikes at any time."

The location, the activity and the sincerity of Mrs. Parsons' commends her invitation to us. Thank you for the trip tip in the direction of the Grand River area !

FLOWERS OF SOME COMMON TREES

By Floyd Caesar

All of us, botanists and laymen alike, have a keen appreciation of the larger wild flowers which return each year to delight the eye and gladden the heart. The trillium, willow-herb and pink jewel-weed have an obvious beauty to whose appeal we readily respond. But the rare and subtle charm of the tiny gems borne on the branch-tips of elm, maple and tamarack can be so easily missed that it has been experienced by only a few. I wish to describe briefly some of these diminutive blossoms in the hope that this coming spring will bring to some of my readers a new field of nature activity.

Among the first trees to bloom is the American Elm. As early as the first week in April one may see a faint purplish mist enveloping this magnificent, common tree. Closer investigation reveals that the very large, oval buds have burst open to release clusters of flowers which hang downward on long pedicels. The bloom has no corolla, but is most colourful because of its cream-and-purple calyx, from which protrude five to nine powdery yellow stamens. These flowers are bisexual, each one producing both pollen and seeds.

Almost simultaneously with the elm come the blooms of the Red Maple. Long before the leaves appear, the deep red buds open and the gay flowers emerge. In form they are shallowly cup-shaped, with five sharply-pointed petals. The sexes are separate: the male flowers are yellow at the base with bright scarlet points on the petals, and the stamens have long filaments; the female flowers are similar but have abortive (non-functional) stamens on short filaments and the gay red pistil thrusts its forked stigma well out beyond the petal-tips. A cluster of red maple flowers is one of the finest subjects for the nature photographer's camera.

Completely different from the foregoing are the flowers of the familiar Norway Maple. They are perfect, and appear at the same time as the unfolding leaves (early- to mid-May). Surrounding a shiny green disk are five brown, strap-shaped sepals and five bright yellow, pointed petals. Growing in a ring from the disk, the stamens look like the spokes of a wheel; and in a depression at the centre of the disk is the stigma, which resembles the tip of a brilliant red tongue. The entire bloom is about one-quarter inch in diameter. If it were two inches across, there is no doubt that it would be popularly considered one of the great sensations of the flower world.

During May the Beech tree produces its male and female flowers, which are very different from each other in appearance. They are not colourful, as all parts are light green except for the yellow anthers, but in form they are quite remarkable. The male flower-cluster looks like a round green pin-cushion with stamens thrusting out in all directions. The female flowers are borne in pairs, with six long, sharp sepals; around the base of each flower are four green segments on bracts which are covered with sharp prickles. These will later form the husk of the well-known beech-nut.

We do not think of the conifers are having flowers, but in late May many of our evergreens bear brilliant inflorescences (technically called strobili) which are aesthetically as pleasing as any blossom. On the Red Pine, for example, the male inflorescence consists of a cluster of brilliant red strobili which look a great deal like miniature strawberries. The minute, new-born female cones of Scotch Pine are yellow, with a bright red tip on each scale. Without a doubt, the loveliest of all coniferous "bloom" is the young female cone of the Tamarack or Larch. The cone is about one-half inch in diameter, with many recurved scales that look like triangular petals. These scales are green, with a sharply defined red marking on each one. Because the cones face upward, they can be seen readily only from above.

In July, when most trees have finished blooming, we can find the flowers of the American Linden or Basswood. They are unusual and interesting in several respects. A long, narrow, leaf-like structure (bract) grows from the twig, bearing on its underside a long stalk. At the lower tip of this stalk, several smaller, short stalks (pedicels) fork outward. Each pedicel supports one perfect, half-inch flower. There are five sepals and five soft-yellow petals, each of the latter with a stamen growing near its base. The pistil has a stigma that spreads out in five parts. These flowers are heavily loaded with nectar and are great favourites with bees and many other insects. And best of all, they offer for our delectation an exquisite fragance.

I have offered here a modest sampling of the many delights which await the naturalist who may wish to explore the microcosm with an enlarging glass. And now I need only say this:

Fare forth, lens in hand. A new world is yours!

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"The Wood Duck" extracts a saddening item from "The Globe and Mail", Monday, March 14, 1960. The insert is made in tribute and to the memory of:

//ROY CHAPMAN ANDREWS//

Carmel, Calif., March 13 (AP)--Dr. Roy Chapman Andrews, 76, explorer and naturalist, died here Friday of a heart attack.

Dr. Andrews, who had been living in retirement for several years in nearby Carmel Valley, gained world fame in the 1920's through a series of expeditions to Central Asia. He was former director of the American Museum of Natural History in New York.

Dr. Andrews combined scientific ability with the showmanship necessary to obtain public financial support for exploration ventures of true scientific importance.

THE MYSTERY OF NOCTURNAL POLLINATION

The sciences have developed with such rapidity, that the amateur scientist or naturalist cannot hope to discover new plants and insects, as the case was twenty or thirty years ago. Furthermore to do any research now, requires a great deal of specialized equipment, financial aid and time.

Therefore it is with pleasure that the Hamilton Naturalists' Club announces that its members have the opportunity of participating in a project of original research concerning the pollination of orchards by nocturnal insects.

Professor M. V. Smith of the Apiculture Department of the Ontario Agricultural College, Guelph, has kindly offered to lend all possible assistance in this venture. It is hoped that with the aid of the members of this Club and any friends who are interested, we may add to the knowledge of this branch of the sciences and thus benefit the fruit farmers of Southern Ontario by our efforts.

Our particular aims would be to collect data that could be of assistance to Prof. Smith and his students in this problem. Two methods are proposed for this project: collecting the insects, identifying them and examining them for pollen, and the other method is to tag them with fluorescent markers to aid in a study of their foraging behaviour.

All those members and friends interested in contributing their "time" to this project, on evenings when the fruit orchards are in bloom, please contact:

Alice Lamoureux
JA 9-5928

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.....and now you know.

Swamp Buttercup, Ranunculus septentrionalis, grows to a height of three feet; flowering through April to July in swamps and wet areas. The flower is one inch across and consists of five bright, yellow petals.

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Blunt-leaved Hepatica, Hepatica americana, is one of the first Spring flowers to appear. It grows to a height of six inches in open woods and forest slopes, in a colour range of blue through violet, and white. The flower consists of coloured sepals instead of petals and the green involucre replaces the calyx.

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Bloodroot, Sanguinaria canadensis, belongs to the poppy family, and is one of the first flowers of Spring. The white flowers are borne singly. The leaf is lobed and displays its underside as it curves around the flower stalk.

THERE'S A BLUEBIRD!!

Being an early spring migrant, the Bluebird arrives in Ontario in March or early April. In "The Wood Duck" of February, 1960 our Junior naturalists were urged to support a "Save the Bluebirds" campaign being sponsored by the Federation of Ontario Naturalists. To acquaint our full membership with this wise undertaking, we are quoting directly from the Federation's quarterly "Bulletin", December, 1957:

Nest-Boxes

"Fortunately the bluebird will readily accept man-made nest-boxes which supplement the supply of natural nest sites. A number of interested people have undertaken projects to encourage bluebirds to nest in their locality. Outstanding examples of this are Mrs. A. Laskey of Nashville, Tennessee, Dr. T. E. Musselman, of Quincy, Illinois and to a lesser degree, the Toronto Field Biologists' Club at Maple, Ontario.

"A simple box, five inches square and eight inches high (inside measurements), with a one-and-one-half-inch entrance hole cut six inches from the floor, will suffice. It is important that the entrance hole be no more than one and one-half inches in diameter, as any larger size will admit starlings. To facilitate observation and cleaning, the box should be made with a hinged roof, which is slanted to allow rain to run off. A coat or two of stain will help to preserve the wood.

"It is important to erect the boxes early in the year--ideally in February or early March, as the bluebird arrives in Ontario in March or early April. The bluebird likes an open area, so it is best to erect the boxes along concession roads, on abandoned farms or in open park land. Attach the boxes to fence posts, dead trees or old buildings, approximately five feet above the ground, with the entrance hole facing either east or south. The boxes should be spaced at least one hundred yards apart."

To emphasize our earlier advice, we say, again: You, too, can help by building bluebird houses that can be placed in the outskirts of Hamilton, at the edges of farmers' fields. To find out how,--Telephone: Mr. Robert Elstone (FU 5-9963) or Dr. Douglas Davies (JA 9-5130).

.....and now you know.

The Eastern Chipmunk, Tamius striatus, hibernates from the first frost in the fall, till March. There is a litter of four or five young in the spring or mid-summer, and reports indicate that there may be a litter in the fall.

The Red Fox, Vulpes fulva, mates from February to March, and the young are born 51 days after. These animals have a remarkable sense of smell, good sight and excellent hearing and intelligence.

LETTERS TO THE EDITOR

RHYNCHODEMUS

To the Editor:

Since last month's article "Do You Know These Invertebrates?" Mr. Monty Wood has found three specimens of a land planarian, Rhynchodemus sp. in the greenhouse of McMaster University. Although these were crawling among moss and liverwort which had been collected from the edge of Dundas Marsh, some plants and soil from the United States had also been brought into the greenhouse in the last few months. This spring and summer, careful observations along the slopes of the Marsh by flashlight at night may confirm that this rare land planarian occurs at Hamilton.

D. M. Davies.

Your letter sounds the alert for an interesting development. We appreciate this follow-up on your excellent article in the March "Wood Duck".

ED.

PROJECTS ? ?

To the Editor:

Could you have someone write a series of articles on nature projects for:

(1) Adults.
(2) Family. (I find that going on nature walks with my family is one of the most enjoyable ventures in life).
(3) Teachers. (Projects that pupils would relish)?

Maybe your readers could take turns and tell about some nature projects that they have carried out.

Beginner.

An excellent suggestion, Beginner! We refer you to pages 124, 125 of this current "Wood Duck". How about "The Mystery of Nocturnal Pollination" or "There's a Bluebird" for a start? Rashly, we promise our readers a good series beginning soon, including expert instructions on the care and keeping of aquaria and terraria. Keep watching "The Wood Duck".

THE SIGNPOST

With the spring scene under inches of unrelenting snow, the April Signpost finds it difficult to assume the proper attitude, to strike the right mood. However, the Hamilton Naturalists' Club piece de resistance, our April Meeting, conspires nobly!

If you haven't already heard that the FIRST ANNUAL INTERNATIONAL EXHIBITION OF NATURE PHOTOGRAPHY promises to be an unqualified success, we furnish details that should be convincing. Visually, at least, Spring will be with us! Mrs. Audrey Hawks, who has been receiving and cataloguing material for the Exhibition, reports that over 150 entries with probably four times that number of splendid slides have been collected from Canadian, American and foreign sources. Closing date for entries is March 25, 1960. Your attendance and interest at the preliminary judging and at the showing of award-winning entries will assure our First Annual Exhibition of Nature Photography the significance that it has already earned.

HAMILTON NATURALISTS' CLUB

presents

FIRST ANNUAL INTERNATIONAL EXHIBITION

NATURE PHOTOGRAPHY

John B. Giles
Exhibition Chairman

Mrs. Audrey Hawks
Exhibition Secretary

Panel for Selection

Professor A. F. Coventry.....Streetsville, Ontario
William K. Kirkwood.....Ancaster, Ontario
Louis Quitt, A.P.S.A.....Buffalo, New York

Judging entries and selection of award-winning slides will take place, SATURDAY, APRIL 2nd, 1960, beginning at 9.00 a.m. in the morning and continuing until the selection is finalized. After the judging is over, there will be a banquet at Fischer's Hotel, 51 York Street, Hamilton, a Dutch treat, for those actively engaged in Exhibition chores.

YOUR SIGNPOST: Lecture Room,
Hamilton Public Library,
550 Main Street, West,
Hamilton, Ontario.

APRIL MONTHLY MEETING

MONDAY, APRIL 11th, 1960, 8.00 P.M.

The selected, award-winning slides will be publicly announced and shown to the public at the regular April Meeting of the Hamilton Naturalists' Club. There will be no admission charged. Please note the change of place for this occasion .

YOUR SIGNPOST: Auditorium,
Westdale Secondary School,
Main Street, West,
Hamilton.

PUBLIC IS CORDIALLY INVITED TO ATTEND - ADMISSION IS FREE - DO COME!

FIELD EVENTS:

Sunday, April 10th, 1960. Oak Orchard Swamp Trip.

Auto trip to Oak Orchard Swamp to see thousands of Canada Geese and early shore birds. Bring lunch.

YOUR SIGNPOST: Time: 7.00 a.m.
Place: Main and Ottawa Sts.,
Leader: Jim Burns.

Good Friday, April 15th, 1960. Hike - North Shore of Bay.

Walk along the North Shore of the Bay to see the new Plant Life--and bring your binoculars, of course.

YOUR SIGNPOST: Time: 9.00 a.m.
Place: Low Level Bridge.
Leader: J. Harvey Williams.

Saturday, April 23rd, 1960. Spring Walk - Westdale Ravine.

We shall walk through the Westdale Ravine to see wild flowers and migrating birds.

YOUR SIGNPOST: Time: 10.00 A.M.
Place: Children's Gardens Club,
Leader: R. F. D. Bourne.

VICTORIA DAY NATURE WEEK-END CAMP

MAY 21st, 22nd & 23rd, 1960

KENESSERIE CAMP

LAKE ERIE near RONDEAU

A separate notice enclosed this month sets forth all the details of a wonderful holiday week-end treat. Registrations must be submitted by May 1st, 1960. Make your plans to attend the Hamilton Naturalists' Club Victoria Day Nature Week-end Camp. Get your application in right away.

A Signpost directs your attention towards Grimsby. A correspondent, builder of bird houses and bird feeding trays lists his standard makes at $1.75. If you would like to investigate this notice, here's

YOUR SIGNPOST:

Mr. M. F. Fisher,
72 Park Road,
Box 126,
GRIMSBY BEACH, Ontario.

THE WOOD DUCK

THE WOOD DUCK is published monthly, from September to May, by the Hamilton Naturalists' Club. Its purpose is to aid in the study, appreciation and conservation of our native, wild and beautiful heritage. Members are urged to share their nature experiences and are requested to send their contributions to the Editor by the 10th of the month, to appear in the following issue. Material may be reprinted without special permission, if credit lines are given.

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DUPLICATOR	Mr. Harold Cunliffe, 856 Central Ave. HAMILTON.
CIRCULATION	Mr. & Mrs. C.L. Powell, 142 Pearl St. HAMILTON.

Subscription available upon affiliation with the Hamilton Naturalists' Club.

JUNIOR CLUB NEWS

President	Ralph Idema	FU. 3-6411
Vice-President	John Miles	JA. 2-6160
Secretary	Caroline Lawson	MA. 8-8135
Vice-Secretary	Norma Allewell	MA. 8-6406
Records Secretary	Nan Coolsma	JA. 9-6290
Study Area Director	Jim Morrow	LI. 5-9311
Representatives (for those under 14 years)	Marina Idema	FU. 3-6411
	Alfred Senior	LI. 8-1442

MEMBERSHIP GROWING

Many girls and boys realize what they have been missing only after they join our members at a meeting or on a hike. Often a member brings a friend or classmate who wonders whether he will like the Club. Usually the friend enjoys it so much that he or she soon joins.

The Club has grown to about sixty girls and boys and at last month's meeting when Mr. Eric Bastin spoke on Long Point there were thirty-five persons present. Membership is just $1.00 per year and includes meetings, hikes and a subscription to "The Wood Duck", published nine times each year.

FUTURE JUNIOR CLUB EVENTS

MEETINGS (Y.W.C.A., Main Street just west of James Street)

Saturday, April 9 - 7.30 p.m., Y.W.C.A., Room "E".

Last summer Miss Eunice Smillie made an interesting trip to Finland and Lapland. Tonight she will show us coloured slides of some of the beautiful flowers and scenery as seen through her camera. Some of these are quite like the flowers that will be blooming soon in our own woods.

Saturday, April 23 - 7.30 p.m., Y.W.C.A., Room "E".

Tonight we shall have movies or coloured slides of birds and mammals. We can also tell each other which of the returning spring birds we have seen. Bring your friends!

.....and now you know.

Winter or summer you can identify an American Sycamore (Platanus occidentalis) by its patchwork quilt bark. Sycamore bark stands out in patches of white, pale green and brownish gray. As the trunk grows, it presses off the old bark.

HIKES

Saturday, April 2 - 9.30 a.m. to Noon. Hike.

John Miles (JA. 2-6160) will lead a hike around the lower end of the Dundas Marsh and the Bay. Meet at King and Bond Streets (at George R. Allen School) just west of Longwood Road. Wear waterproof footwear.

Tuesday, April 19 - 9.00 a.m. to Noon. Hike.

Mr. James Dowall (JA. 9-9109) will lead a hike along the south side of the Dundas Marsh. Many bird migrants may have arrived and hawks may be returning at this time. Meet at King Street and University Avenue. Wear waterproof footwear! Bring your friends.

Saturday, April 30 - 9.30 a.m. to Noon. Hike.

John Miles (JA. 2-6160) will lead another hike around the shore of Dundas Marsh. The woods and waters will be filled with newly-arrived birds. Many flowers will be coming into bloom. Wear waterproof footwear. Meet at King and Bond Streets. (at George R. Allen School) just west of Longwood Road.

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.....and now you know.

In 1895 John Burroughs wrote his first book "Wake-Robin" ("the common name of the white Trillium, which blooms in all our woods and which marks the arrival of all the birds"). In this piece of literary nature, he claims:

"Ornithology cannot be satisfactorily learned from the books. The satisfaction is in learning it from nature. One must have an original experience with the birds. The books are only the guide, the invitation. Though there remain not another new specimen to describe, any young person with health and enthusiasm has open to him or her the whole field anew, and is eligible to experience all the thrills and delight of original discoverers."

Do you agree with John Burroughs? There are many books by this author.....who spoke with great conviction, himself an active participant in the delights and wonders of nature study. Get some works (essays) of John Burroughs from the Hamilton Public Library.

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